

**SYSTEMS AND METHODS FOR THE AUTOMATED SENSING OF MOTION IN A
MOBILE ROBOT USING VISUAL DATA**

Abstract of the Disclosure

The invention is related to methods and apparatus that detect motion by monitoring images from a video camera mounted on a mobile robot, such as an autonomously navigated mobile robot. Examples of such robots include automated vacuum floor sweepers. Advantageously, embodiments of the invention can automatically sense a robot's motional state in a relatively reliable and cost-efficient manner. Many configurations of robots are configured to include at least one video camera. Embodiments of the invention permit the use of a video camera onboard a robot to determine a motional state for the robot. This can advantageously permit the motional state of a robot to be determined at a fraction of the cost of additional sensors, such as a laser, an infrared, an ultrasonic, or a contact sensor.

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